Joint Base Charleston - Air
Environmental Restoration Program
Charleston, South Carolina

STATEMENT OF BASIS

Joint Base Charleston-Air
Charleston, South Carolina

Facility/Unit Type: Joint Base Charleston-Air/Area of Concern (AOC) M
Contaminants: None
Media: None
Proposed Remedy: No Further Action (NFA)

INTRODUCTION

The purpose of this Statement of Basis (SB) is to present the decision for AOC M, which is NFA, and to invite public comment on this proposal. This SB provides AOC M background information and explains the reasons why NFA is proposed. See Figure 1 for a facility location map.

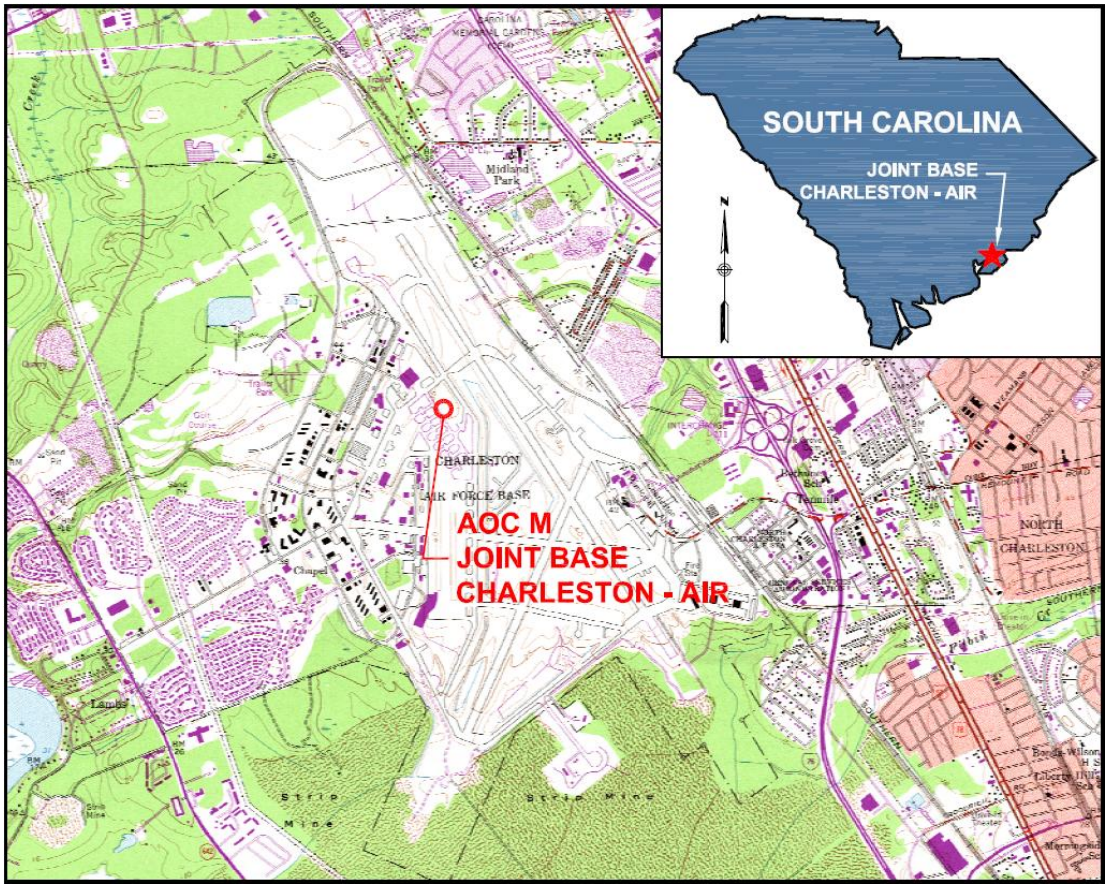

Figure 1. AOC M Site Location – Joint Base Charleston - Air, SC

Joint Base Charleston-Air (JB CHS-Air) is located in Charleston County, approximately 10 miles northwest of Charleston, South Carolina. JB CHS-Air comprises 3,731 acres of contiguous property with a Base population of approximately 8,500. The host command at JB CHS-Air is the 628th Air Base Wing,

whose primary mission is to maintain immediate airlift capability to deliver and sustain air and combat forces to combat locations throughout the world. During peacetime, operations include re-supply of overseas American embassies and military installations and supply of aid to natural disaster areas.

This SB presents the proposed remedy that "No Further Action" (NFA) is required for AOC M. A site map for AOC M is provided as Figure 2; the approximate AOC M boundary is outlined in blue. JB CHS-Air and South Carolina Department of Health and Environmental Control (SCDHEC) jointly developed the specific site remedy described herein and are issuing this SB as part of their public participation responsibilities under Section 7004(b) of the Resource Conservation and Recovery Act (RCRA) Title 42, United States Code Section 6974(b), and applicable state law. This document is intended to inform the general public of the proposed remedy for this site and follows the United States Environmental Protection Agency (USEPA) Office of Solid Waste and Emergency Response (OSWER) Directive 9902.6. SCDHEC will not approve the proposed remedy until the public comment period has ended and all information submitted during the public comment period has been reviewed and considered. SCDHEC may modify the proposed corrective action or select another action based on new information or public comments received on this proposal. Therefore, the public is invited to review and comment on all alternatives, including any potential corrective measures that were not previously considered.

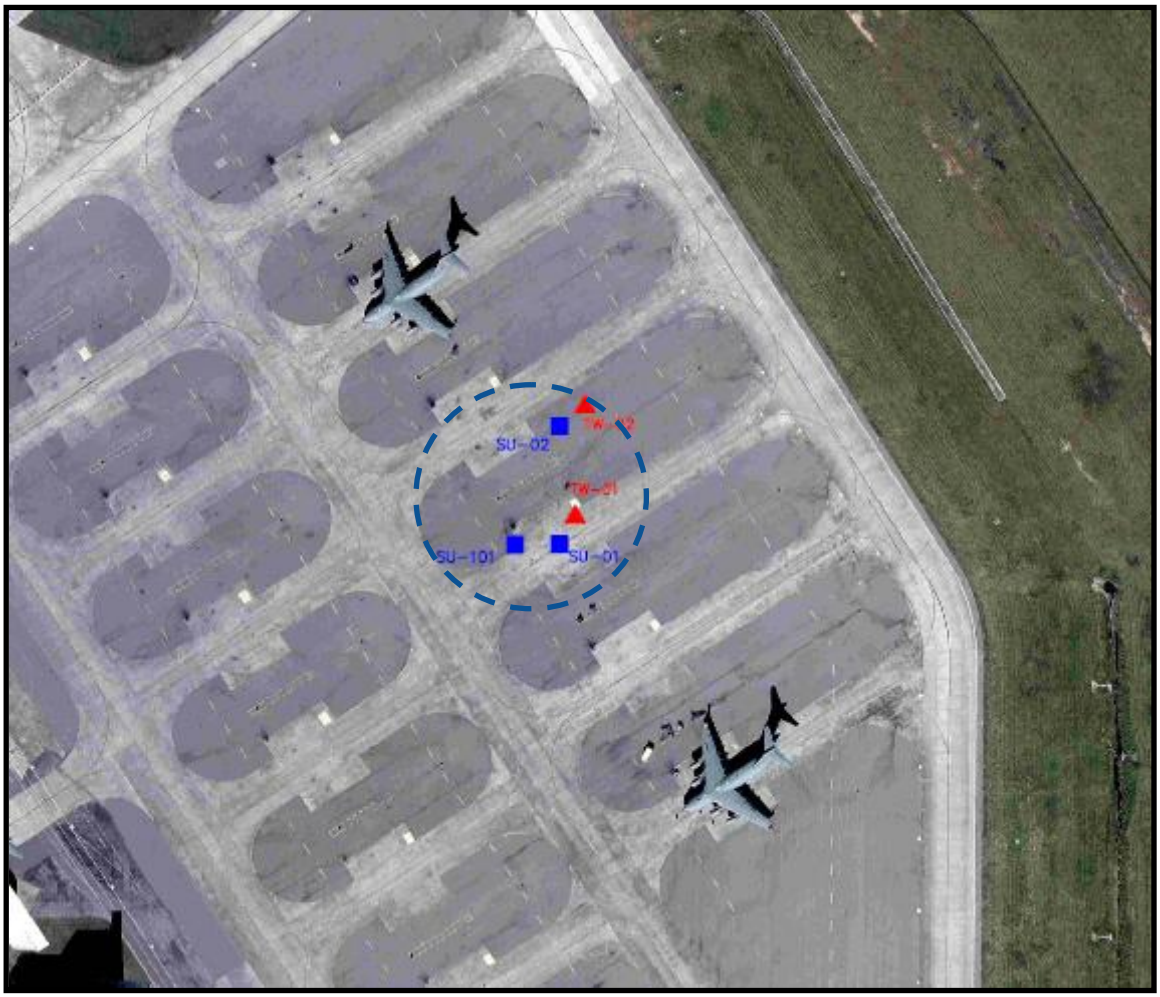

Figure 2. Site Map of AOC M – Joint Base Charleston-Air, SC

The information summarized in this SB can be found in greater detail in documents contained in the Information Repository for this facility. This SB does not replace those documents. Historical documents can be found in the administrative record at JB CHS-Air and the SCDHEC office located in Columbia, South Carolina (addresses provided at the conclusion of this document). SCDHEC encourages the

public to review these documents in order to gain a more thorough understanding of the site and the activities that have been conducted.

PROPOSED REMEDIES

The recommended alternative for AOC M is NFA. This remedy was selected by SCDHEC in the May 11, 2011 approval letter for the *Soil Sampling Summary Report* (AECOM, February 3, 2011).

SITE BACKGROUND

AOC M is an inactive site located north of Building 63 in the northern portion of JB CHS-Air. A release reportedly occurred in 1980 when approximately 1,000 gallons of JP4 fuel was spilled north of the Building 63 Wash Rack. The spill flowed across the pavement and onto a grassed area approximately 900 feet to the north. At that time, the grassed area was located between the North Extension Taxiway and the paved aircraft parking apron. Since the time of the spill, the grassed area has been removed and soil backfill was placed in the area (estimated 3 feet in thickness) during a JB CHS-Air fuel systems project. In addition, the area has been paved with asphalt and concrete as part of the development of the JB CHS-Air taxiway and expansion of the aircraft parking apron. Access to this site under current land use controls (LUC) is limited to JB CHS-Air personnel who may work or perform maintenance activities on the aircraft parking apron.

SITE INVESTIGATIONS

In 1990, AOC M was identified in the interim RCRA Facility Assessment Report (Kearney, 1990) as requiring a RCRA Facility Investigation (RFI) to determine if contamination was present as a result of the of the 1980 fuel spill. The initial RFI was conducted in 1994 and consisted of soil sampling at two subsurface locations. Prior to the 1994 RFI, no analytical data had been collected for the site.

The approximate locations of the two soil samples collected in 1994 (designated as SU-01 and SU-02) are shown on Figure 2. Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and total petroleum hydrocarbons (TPHs). No residual fuel contamination or TPHs were detected during the investigation. However, several SVOCs were detected at low concentrations at location SU-01. Based on the results of the 1994 investigation, SCDHEC requested that groundwater characterization be completed in the area where the soil samples had been previously collected. Subsequent to the 1994 sampling event, the area was paved with asphalt and concrete as part of the development of the JB CHS-Air taxiway and expansion of the aircraft parking apron. Currently, AOC M is within the aircraft parking apron, as shown in Figure 2.

In December 2008, an investigation was performed at AOC M to determine the impact of the 1980 fuel spill to groundwater beneath the site. Two temporary well points were installed and sampled. The approximate well locations are identified on Figure 2 as TW-01 and TW-02. Groundwater samples were collected and analyzed for VOCs including methyl tert-butyl ether (MTBE) and SVOCs. The groundwater results for the chemicals of concern (COCs) at AOC M were either below the USEPA Maximum Contaminant Levels (MCL) or non-detect, indicating that groundwater beneath the site has not been impacted by COCs. Based on the results of the soil and groundwater investigations and the renovations that had occurred at the site since the 1994 investigation, a NFA recommendation was proposed for the site. In a letter dated May 8, 2009, SCDHEC concurred that additional groundwater investigation was not required for AOC M. However, SCDHEC maintained that, without the collection of confirmatory soil samples, NFA could not be granted.

In August 2010, confirmatory soil sampling was performed at AOC M to determine the current concentrations of the SVOCs in soils beneath the site. Confirmatory sampling included the collection of one soil sample from location SU-101, located in the vicinity of historical soil sampling location SU-01 (Figure 2). The soil sample results indicated that all detected concentrations had decreased significantly from the 1994 soil sampling event. However, concentrations of one PAH constituent, benzo[b]fluoranthene at 68 micrograms per kilogram (µg/kg) remained slightly above the South Carolina risk-based screening level (RBSL) of 66 µg/kg. The RBSL for benzo[b]fluoranthene is a conservative standard established for the protection of groundwater. However, based on the results of the 2009 groundwater sampling at AOC M, groundwater beneath the site has not been impacted by the 1980 fuel spill. The substantial decrease in contaminant concentrations at AOC M can likely be attributed to several processes, including the removal and disturbance of soils during the aircraft parking apron construction activities and the dilution and dispersion of contaminants over the 30-year time period since the original spill occurred.

SUMMARY OF SITE RISKS

A Human Health Risk Assessment (HHRA) was completed as part of the 1994 RFI investigation. Both carcinogenic and non-carcinogenic risks were calculated for potential exposure of future residents at the site to soil contamination through ingestion and dermal (direct contact) scenarios. It was determined that, the estimated risks under these scenarios were within the acceptable range established by the USEPA and no adverse systemic or carcinogenic effects are expected for either adult of child residents. Based on the 2009 groundwater sampling and the 2010 confirmatory soil sampling results, the risk for migration of COCs from the JP-4 spill to groundwater beneath the site is minimal. This determination is well supported by the laboratory analytical results from the 2009 groundwater sampling event in which all COCs were either non-detect or below the applicable screening criteria. Based on the current and historical information, AOC M presents no unacceptable risk for any future use.

SCOPE OF CORRECTIVE ACTION

NFA is required for AOC M.

CONTINGENCY REMEDIES

Contingency remedies are not necessary for NFA at AOC M.

ANTICIPATED IMPACTS OF CLEANUP ON THE LOCAL COMMUNITY

No significant impacts to the local community are associated with the proposed NFA at AOC M.

STATUTORY AUTHORITIES

This document is being issued in accordance with 40 Code of Federal Regulations (CFR), in compliance with federal hazardous waste management requirements. The JB CHS-Air Corrective Action Program is conducted under the authority of Sections 3004(u), 3004(v), 3005(c)(3), 3008(h), 3013, 6001, and 7003 of the RCRA (42 U.S.C. 6901 et seq.) as amended by the Hazardous & Solid Waste Amendment of 1984 (HSWA) (Pub. L. No. 98-616, 98 Stat. 3221) and the Federal Facility Compliance Act of 1992 (FFCA) (Pub. L. 102-386, 106 Stat. 1505). This SB is part of the corrective action process and is a requirement of the HSWA Corrective Action Permit, referred to as the HSWA permit, issued to JB CHS-Air by SCDHEC.